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CLAIM AMENDMENTS

1. (Cancelled) A storage rack system comprising:

a post having a plurality of openings;

a beam member having a beam flange with an inner side and an outer side, a headed lug protruding from the inner side of the beam flange, the headed lug disposable in a corresponding opening of the post to connect the beam member to the post;

a locking pin opening in the beam flange, the locking pin opening aligned at least partially with one of the plurality of openings of the post when the beam member is connected to the post;

a latch coupled to the beam flange, the latch having a resilient arm with a locking pin extending therefrom, the resilient arm biasing the locking pin to protrude through the locking pin opening of the beam flange and at least partially into an opening of the post aligned with the locking pin opening when the beam member is connected to the post;

a locking flange extending generally radially from the locking pin, the locking flange engageable with the inner side of the beam flange to inhibit withdrawal of the locking pin from the locking pin opening.

2. (Cancelled) The system of Claim 1, the beam flange having recesses on the inner side thereof, the locking pin having an end portion extending away from the resilient arm, the locking flange extending generally radially from the end portion of the locking pin and adjacent the flange recess of the beam flange.

3. (Cancelled) The system of Claim 2, the beam flange having first and second openings, one of the first and second openings is the locking pin opening.

4. (Cancelled) The system of Claim 3, the latch having an assembly aperture therethrough and aligned at least partially with one of the first and second openings.

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5. (Cancelled) The system of Claim 2, the locking flange is a lobe extending from a side of the locking pin, a tooth protruding from the locking flange and extending toward the resilient arm, the beam flange having a tooth recess disposed in the flange recess, the tooth engageable with the tooth recess as the locking pin is withdrawn from the locking pin recess of the beam flange.

6. (Cancelled) The system of Claim 5, the locking flange is angled toward the resilient arm.

7. (Cancelled) The system of Claim 2, the locking flange is a lobe extending from a side of the locking pin, the headed lug includes a lug flange extending radially from a side portion thereof, the locking flange extends generally in the same direction as the lug flange.

8. (Cancelled) The system of Claim 7, the beam flange having first and second openings disposed symmetrically thereon, one of the first and second openings is the locking pin opening, the flange recess is disposed between the first and second openings.

9. (Cancelled) The system of Claim 8, each opening of the beam flange has an aperture portion located near the flange recess and a slot portion extending away from the flange recess, the slot portion is formed in a slot recess on the inner side of the beam flange.

10. (Cancelled) The system of Claim 9 further comprising a tooth protruding from the locking flange and extending toward the resilient arm, the locking flange is angled toward the resilient arm, the beam flange having a tooth recess disposed in the flange recess, the tooth engageable with the tooth recess as the locking pin is withdrawn from the locking pin recess of the beam flange.

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11. (Cancelled) The system of Claim 9, the resilient arm has a first end portion with first and second legs protruding therefrom, each leg has a wing member extending outwardly away from the wing member of the other leg, the legs of the resilient arm are slideable into the slot portion of one of the openings and the wing members are disposed in the slot recess thereof to fasten the latch to the beam member.

12. (Cancelled) The system of Claim 1, the latch having protrusions extending from a side thereof adjacent the beam flange to form a gap between the latch and the beam flange.

13. (Cancelled) The system of Claim 2, the locking flange comprises first and second lobes extending from opposing sides of the locking pin.

14. (Cancelled) The system of Claim 13, the beam flange having first and second openings disposed thereon, each opening of the beam flange has an aperture portion and a slot portion, the slot portion is formed in a slot recess formed on the inner side of the beam flange, the slot portion of one opening is adjacent the aperture portion of the other opening, one of the openings is the locking pin opening and the slot recess thereof is the flange recess.

15. (Previously Presented) A latch assembly useable for locking a beam member connected to a post with a headed lug, comprising:

a beam flange having first and second opposite sides, a first locking pin opening, and a second resilient arm retention opening;

a resilient arm having a portion thereof coupled to the first side of the beam flange;

a locking pin extending from the resilient arm, the locking pin protruding through the locking pin opening,

the resilient arm biasing the locking pin through the locking pin opening of the beam flange; and

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a locking flange extending from the locking pin, a portion of the locking flange disposed alongside the second side of the beam flange.

² 16. (Previously Presented) The latch assembly of Claim ¹ 15, the locking flange is a single lobe extending generally radially from a side portion of the locking pin.

³ 17. (Previously Presented) The latch assembly of Claim ¹ 16, the beam flange having a tooth recess on the second side thereof, a tooth protrudes from the locking flange toward the resilient arm, the tooth extends toward the locking pin and is engageable with the tooth recess.

⁴ 18. (Previously Presented) The latch assembly of Claim ¹ 15, the locking flange comprises first and second lobes extending from generally opposing sides of the locking pin.

⁵ 19. (Previously Presented) The latch assembly of Claim ¹ 15, the resilient arm having first and second legs protruding from an end portion thereof, each leg has a wing member extending outwardly away from the wing member of the other leg and generally parallel to the resilient arm.

⁶ 20. (Previously Presented) The latch assembly of Claim ¹ 15 further comprising a plurality of protrusions extending from the same side of the resilient arm as the locking pin.

⁷ 21. (Previously Presented) The latch assembly of Claim ¹ 15, a flange recess on the second side of the beam flange, the locking flange extending generally radially from the end portion of the locking pin and disposed adjacent the flange recess, whereby the locking flange is engageable with the flange recess to limit flexing of the resilient arm.

⁸ 22. (Previously Presented) The latch assembly of Claim ⁷ 21, a tooth recess in the flange recess, the locking flange angled toward the resilient arm, a tooth

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protruding from the locking flange toward the resilient arm, the tooth extends toward the locking pin and is engageable with the tooth recess.

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^{23.} (Previously Presented) The latch assembly of Claim ²², wherein the flange recess is disposed between the locking pin opening and the resilient arm retention opening.

¹⁰
^{24.} (Previously Presented) The latch assembly of Claim ²², each opening of the beam flange has an aperture portion located near the flange recess and a slot portion extending away from the flange recess, each slot portion is formed in a slot recess on the second side of the beam flange.

¹¹
^{25.} (Previously Presented) The latch assembly of Claim ²⁴, the locking flange comprises first and second lobes extending from generally opposing sides of the locking pin.

¹²
^{26.} (Previously Presented) The latch assembly of Claim ²⁵, the beam flange having first and second openings, each opening of the beam flange has an aperture portion and a slot portion, the slot portion is formed in a slot recess on the second side of the beam flange, the slot portion of one opening adjacent the aperture portion of the other opening, one of the openings is the locking pin opening and the slot recess thereof is the flange recess.

¹³
^{27.} (Previously Presented) A flex-limited, latching, locking latch and beam combination, comprising:

a beam flange having an opening through the flange and a flexible arm retention slot;

a flexible arm having a portion coupled to a side of the flange;
a locking portion extending from the flexible arm, the locking portion protruding through the flange opening; and

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a flex limiting member extending from the locking portion along a side of the flange opposite the side thereof to which the flexible arm is coupled,

whereby the flex limiting member is engageable with the side of the flange along which it extends to limit flexing of the flexible arm away from the side of the flange to which the flexible arm is coupled.

¹⁴
28. (Previously Presented) The latch of Claim ²⁷, a recess disposed on the side of the flange opposite the side thereof to which the flexible arm is coupled, a portion of the flex limiting member disposable in the recess when the flexible arm is flexed away from the side of the flange to which the flexible arm is coupled.

¹⁵
29. (Previously Presented) The latch of Claim ²⁸, the flex limiting member not protruding substantially beyond the side of the flange along which the flex limiting member extends when the flex limiting member is disposed in the recess.

¹⁶
30. (Previously Presented) The latch of Claim ²⁷, the locking portion is a generally cylindrical-shape member extending from the flexible arm, the flex limiting member is a deformed portion of the cylindrical-shape member.

¹⁷
31. (Previously Presented) The latch of Claim ³⁰, a recess disposed on the side of the flange opposite the side thereof to which the resilient arm is coupled, the locking pin and the flex limiting member not protruding beyond the side of the beam flange opposite the side thereof to which the flexible arm is coupled.

¹⁸
32. (Previously Presented) A flex-limited, latching, locking latch and beam combination, comprising:

a beam flange having an opening through the flange and a flexible arm retention slot;

a flexible arm having a portion coupled to a side of the flange;

a locking portion extending from the flexible arm, the locking portion protruding through the flange opening;

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a flex limiting member extending from the locking portion along a side of the flange opposite the side thereof to which the flexible arm is coupled; and

a recess disposed on the side of the flange opposite the side thereof to which the flexible arm is coupled,

wherein a portion of the flex limiting member is disposable in the recess when the flexible arm is flexed away from the side of the flange to which the flexible arm is coupled.

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33. (Previously Presented) The latch of Claim 32, the flex limiting member not protruding substantially beyond the side of the flange along which the flex limiting member extends when the flex limiting member is disposed in the recess.

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34. (Previously Presented) The latch of Claim 32, the locking portion is a generally cylindrical-shape member extending from the flexible arm, the flex limiting member is a deformed portion of the cylindrical-shape member, the locking portion not extending substantially beyond the side of the flange along which the flex limiting member extends when the flex limiting member is disposed in the recess.

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35. (Cancelled) A locking member for a rack, comprising:
a mounting bracket, having a first leg defining a substantially flat interior surface and an exterior surface and a plurality of mounting studs projecting inwardly from said interior surface, said first leg also defining at least a first through hole;

a resilient member mounted on said first leg, lying adjacent to said exterior surface, and including a locking pin having a shank extending through said first hole, wherein said locking pin defines an enlarged head portion and said interior surface defines a recess adjacent to said first hole which receives said enlarged head portion.

36. (Cancelled) A locking member for a rack as recited in claim 35, wherein said recess is deep enough to permit said locking pin to be substantially flush with said interior surface when said resilient member is retracted.

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37. (Cancelled) A locking member for a rack as recited in claim 36, wherein said first hole includes an enlarged-width portion large enough to permit the head of said locking pin to pass through and a narrower width portion large enough to permit the shank to pass through but too narrow to permit said enlarged head to pass through, and wherein said recess lies adjacent to said narrower width portion.

38. (Cancelled) A locking member for a rack as recited in claim 36, wherein said resilient member is staked to said first leg at an end distant from said locking pin.

39. (Cancelled) A locking member for a rack as recited in claim 36, wherein said first leg also defines a second hole, and wherein both said first and second holes define an enlarged width portion and a reduced width portion, and wherein said interior surface defines recesses adjacent to the reduced-width portion of each of said holes.

40. (Cancelled) A locking member for a rack as recited in claim 37, wherein said first leg also defines a second hole, and wherein both said first and second holes define an enlarged width portion and a reduced width portion, and wherein said interior surface defines recesses adjacent to the reduced-width portion of each of said holes.

41. (Cancelled) A locking member for a rack as recited in claim 39, wherein said resilient member includes a clip having left and right wings mounted in the recess of said second hole.

42. (Cancelled) A locking member for a rack as recited in claim 36, and further comprising a hole in said resilient member aligned with a hole in said first leg.

43. (Cancelled) A mounting bracket for mounting a horizontal beam of a rack on a vertical member of a rack, comprising:

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an L-shaped member, having a substantially flat interior surface and an exterior surface and defining first and second legs, said first leg having two lugs protecting inwardly from its interior surface and defining first and second holes, said second hole having a narrow width portion, and wherein said interior surface defines a recess adjacent to said narrow width portion.

44. (Cancelled) A mounting bracket as recited in claim 43, and further comprising a resilient member mounted on said first leg, said resilient member including a clip extending through said second hole and retained in said recess.

45. (Cancelled) A mounting bracket as recited in claim 44, wherein said resilient member further includes a locking pin which extends through said first hole.

46. (Cancelled) A mounting bracket as recited in claim 45, wherein said locking pin has a shank and an enlarged head and said first hole defines an enlarged width portion large enough to permit the enlarged head to pass through and a narrower width portion, which is wide enough to permit the shank to pass through but not wide enough to permit the enlarged head to pass through.

47. (Cancelled) A mounting bracket as recited in claim 46, wherein said interior surface also defines a recess adjacent to the narrower width portion of said first hole, in order to permit the enlarged head to be retracted to a position substantially flush with said interior surface.

48. (Cancelled) A rack, including:
a plurality of vertical members defining a plurality of vertical member holes, and a plurality of horizontal beams supported on said vertical members;
a mounting bracket at one end of one of said horizontal beams, including an L-shaped member, having a substantially flat interior surface and an exterior surface and defining first and second legs, said first leg having at least two lugs projecting inwardly from its interior surface, said two lugs being received in two of said vertical member

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holes; wherein said first leg defines first and second holes, at least said first hole being aligned with one of said vertical member holes, each of said first and second holes having an enlarged width portion and a narrower width portion, wherein said interior surface defines a recess adjacent to each of said narrower width portions, and the recess adjacent to the narrower width portion of said second hole terminates short of its respective enlarged width portion[s]; and

a resilient locking member including a clip mounted in the recess of said second hole, with said vertical member preventing said clip from moving further inwardly, and including a locking pin having a shank and an enlarged head, wherein the shank extends through said first hole and through the vertical member hole aligned with said first hole.

49. (Cancelled) A method of assembling and disassembling a storage rack system, the method comprising the steps of:

providing a beam member including a headed lug, a spaced apart opening, and a recess;

connecting a latch assembly to the beam member, the latch assembly including a resilient arm and a locking pin extending from the resilient arm, such that the resilient arm biases the locking pin through the opening in the beam member;

connecting the beam member to a post, such that the headed lug is received by a first opening in the post, and such that the resilient arm biases the locking pin at least partially into a second opening in the post; and

wherein the steps of disassembling the storage rack system include, withdrawing the locking pin from the second opening in the post to allow the beam member to be disconnected from the post;

preventing the locking pin from being completely withdrawn from the second opening in the beam member, such that the recess in the beam member limits the movement of the resilient arm; and

disconnecting the beam member from the post.

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50. (Cancelled) A locking latch arrangement for a storage rack system, comprising:

a beam flange having a plurality of mounting studs projecting inwardly for connecting the beam flange to a post, the beam flange including an inner surface and the beam flange also defining at least a first locking pin opening;

a resilient arm latch mounted on the beam flange, lying adjacent to the exterior surface of the beam flange, and including a locking pin extending through the locking pin opening, wherein the locking pin shank includes a locking flange and wherein the inner surface of the beam flange includes a flange recess area adjacent to the locking pin opening to accommodate the locking flange.

51. (Cancelled) The locking latch arrangement of claim 50, wherein the recess is deep enough to permit the locking pin and locking flange to be substantially flush with the interior surface of the beam flange when the resilient arm latch is retracted.

52. (Cancelled) The locking latch arrangement of claim 51, wherein the locking pin opening includes an aperture portion large enough to permit the locking pin and locking flange to pass through and a slot portion large enough to permit the locking pin to pass through but too narrow to permit the locking flange to pass through, and wherein the recess lies adjacent to the slot portion.

53. (Cancelled) The locking latch arrangement of claim 51, wherein the resilient arm is fastened to the beam flange at an end distant from the locking pin.

54. (Cancelled) The locking latch arrangement of claim 51, wherein the beam flange also defines a second opening, and wherein both the first and second openings define an aperture portion and a slot portion, and wherein the beam flange inner surface defines recesses adjacent to the slot portion of each of the openings.

55. (Cancelled) The locking latch arrangement of claim 52, wherein the beam flange defines a second opening and wherein both the first and second openings

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define an aperture portion and a slot portion, and wherein the beam flange inner surface defines recesses adjacent to the slot portion of each of the openings.

56. (Cancelled) The locking latch arrangement of claim 54, wherein the resilient arm latch includes a clip having left and right wings mounted in the recess of the second opening.

57. (Cancelled) The locking latch arrangement of claim 51, wherein the resilient arm latch includes a hole which may be aligned with an opening in the beam flange.

58. (Cancelled) A beam flange for mounting a horizontal beam of a rack on a vertical member of a rack, comprising:

an L-shaped flange, having a substantially flat interior surface and an exterior surface and defining first and second legs, the first leg having two lugs protecting inwardly from its interior surface and defining first and second openings, the second opening having a slot portion, and wherein the interior surface defines a recess adjacent to slot portion.

59. (Cancelled) The beam flange of claim 58, and further comprising a resilient latch mounted on the first leg, the resilient latch including a clip extending through the second opening and retained in the recess.

60. (Cancelled) The beam flange of claim 59, wherein the resilient latch further includes a locking pin which extends through the first opening.

61. (Cancelled) The beam flange of claim 60, wherein the locking pin has a shank and a locking pin flange and the first opening defines an enlarged aperture large enough to permit the locking pin flange to pass through and a slot portion, which is wide enough to permit the shank to pass through but not wide enough to permit the locking pin flange to pass through.

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62. (Cancelled) The beam flange of claim 61, wherein the interior surface also defines a recess adjacent to the slot portion of the first opening, to permit the locking pin flange to be retracted to a position substantially flush with the interior surface.

63. (Cancelled) A rack, including:
a plurality of vertical posts defining a plurality of vertical post holes, and a plurality of horizontal beams supported on the vertical posts;
a mounting bracket at the end of one of the horizontal beams, including an L-shaped member, having a substantially flat interior surface and an exterior surface and defining first and second legs, the first leg having at least two lugs projecting inwardly from its interior surface, the two lugs being received in two of the vertical post holes; wherein the first leg defines first and second openings, at least the first opening being aligned with one of the vertical post holes, each of the first and second openings having an enlarged aperture and a slot portion, wherein the interior surface defines a recess adjacent to each of the slot portions; and
a resilient latch including a clip mounted in the recess of the second opening, with the vertical post preventing the clip from moving further inwardly, and including a locking pin having a shank and a locking pin flange, wherein the shank extends through the first opening and through the vertical post hole aligned with the first opening.